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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,103	01/27/2004	Willie W. Ng	B-4585 619759-6	2200

7590 06/29/2009
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EXAMINER

VAN ROY, TOD THOMAS

ART UNIT	PAPER NUMBER
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2828

MAIL DATE	DELIVERY MODE
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06/29/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/766,103	Applicant(s) NG ET AL.	
	Examiner TOD T. VAN ROY	Art Unit 2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-17 and 19-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-16,24,25,31 and 32 is/are allowed.
- 6) ☒ Claim(s) 17,19-23,27-30 and 34-39 is/are rejected.
- 7) ☒ Claim(s) 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments, see Remarks, filed 03/17/2009, with respect to claims 1, 10, 17, 29 and 33 have been fully considered and are persuasive. The rejection of the claims has been withdrawn.

The Examiner notes, after further consideration, agreement with the Applicant's position regarding the in vs. on limitations.

The current office action will be subsequently be made non-final.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 17, 19-23, 27-30, and 34-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Waarts et al. (US 2004/0131093) in view of Daiber (US 6816516) and Kim (US 2004/0264514).

With respect to claim 17, Waarts teaches a method of configuring a transmitter to transmit one of a plurality of wavelengths (abstract), said method comprising the steps of: passing a spectrum of light from a gain element (fig.1 #100) into a tunable Fabry-Perot etalon (fig.1 #135 angle tuned), selecting a first portion of said spectrum of light to be transmitted by said transmitter (first output prior to tuning operation); and tuning said tunable Fabry-Perot etalon ([0034]), wherein a second portion of said spectrum of light (new portion after tuning) is transmitted to a grating (fig.1 #150) fabricated in a silica waveguide ([0046]) for reflection back to said gain element (fig.1 #148). Waarts does not teach the etalon to be electrically tuned, or the grating to be sampled. Daiber teaches a similar external cavity laser using an electrically tunable etalon (fig.1). Kim teaches a similar external cavity laser using a sampled grating formed in a waveguide (fig.1). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the angle tuned etalon of Waarts with the electrically tunable etalon of Daiber as a matter of engineering design choice allowing for an alternate method to complete an identical function which allows for alignment simplification of the optical elements. Additionally, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system of Waarts and Daiber with the sampled grating type of Kim in order to utilize a reflection spectrum which allows for a wide tuning range.

With respect to claim 19, Waarts further teaches Vernier tuning (aligning the reflection peaks, figs.2-4).

With respect to claim 20, Waarts further teaches the step of selecting a first portion further comprises the step of coupling a fixed optical grating (fig.1 #150) to said tunable Fabry-Perot etalon (fig.1 #135).

With respect to claim 21, Kim further teaches the grating is UV-induced (fig.3).

With respect to claim 22, Waarts further teaches said spectrum of light corresponds to predetermined frequencies set according to an international standard (980nm standard, [0047]).

With respect to claims 27-28, Waarts teaches the claimed invention, including the gain material to be an amplifier of light (function of laser active region) and the use of GaAs/InGaAs material ([0047]), but does not teach the use of GaInAsP/InP material for the gain media and etalon. These materials are known in the art to be used with lasers and etalons. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the laser of these known materials, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

Claims 29 and 30 are rejected for the same reasons given in the rejection of claims 17 and 27-28 above.

Claim 33 is rejected for the same reasons outlined in the rejection of claim 17 above.

With respect to claim 34, Waarts further teaches the grating has a sequence of reflectivity peaks and the etalon passband selects the used peaks (fig.3b/4a).

With respect to claim 35, Waarts further teaches the gain element is a semiconductor optical amplifier (function of gain layer in a laser to amplify light).

Claims 36-39 are rejected for the same reasons outlined in the rejection of claims 34-35 above.

Allowable Subject Matter

Claims 1, 3-16, 24-25, and 31-32 are allowed.

Claim 26 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TOD T. VAN ROY whose telephone number is (571)272-8447. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun Harvey can be reached on (571)272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2828

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tod T Van Roy/
Examiner, Art Unit 2828